CLAIMS

1. A method for fabricating a high density ceramic thick film comprising the steps of:

providing vehicle comprising an organic binder and solvent;

dispersing ceramic powders into the vehicle to be paste;

forming the paste to thick film by screen printing;

removing the organic binder from the film;

applying sol or sol-like solution to the surface of the film so that the sol or sol-like solution can infiltrate into the film;

removing remaining sol or sol-like solution from the surface of the film by spinning the film;

drying and preheating the film; and

sintering the film at the range from 700 to 1200°C.

2. The method of claim 1, wherein the sol-like solution has metal organic PZT component separated, mixed or dissolved in a solvent.

3. The method of claim 1, wherein the sol or sol-like solution are identical components with the ceramic powder.

4. The method of claim 1, wherein the sol or sol-like solution are not identical components with the ceramic powder.

5. The method of claim 1, wherein the thick film is densified by forming a thick film with a certain thickness by screen printing, then having the sol and sol-like solution infiltrated into the surface of the thick film and performing the process repeatedly more than twice.

6. The method of claim 1, wherein sintering temperature is 800 to 900°C in case of sintering.

7. The method of claim 1, wherein the thickness of the thick film is at the range of 1 to 200 μm .

8. A method for fabricating a high density ceramic thick film comprising the steps of:

providing vehicle comprising an organic binder and solvent;

dispersing ceramic powders into the vehicle to be paste;

forming the paste to thick film by screen printing;

removing the organic binder from the film;

applying sol or sol-like solution to the surface of the film so that the sol or sol-like solution can infiltrate into the film; and

sintering the film at 600 to 700°C.

9. A method for fabricating a high density ceramic thick film

comprising the steps of:

providing vehicle comprising an organic binder and solvent;

dispersing ceramic powders into the vehicle to be paste;

forming the paste to thick film by screen printing;

removing the organic binder from the film;

applying sol or sol-like solution to the surface of the film so that the sol or sol-like solution can infiltrate into the film;

removing remaining sol or sol-like solution from the surface of the film by spinning the film;

drying and preheating the film;

sintering the film;

applying sol or sol-like solution to the surface of the film again so that the sol or sol-like solution can infiltrate into the film; and

sintering the film;